

Notice of Allowability

Application No.

10/646,961

Examiner

Tuan T. Nguyen

Applicant(s)

JEONG, GI-TAE

Art Unit

2824

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to ____.
2. ☒ The allowed claim(s) is/are 1-12.
3. ☒ The drawings filed on 22 August 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 11/8/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date ____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other Attachment A: Search History.


VAN THU NGUYEN
PRIMARY EXAMINER

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 11/8/04 was filed after the mailing date of the present application. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Election/Restrictions

3. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-12, drawn to a sense amplifier having first and second voltage-dependent capacitors coupled to respective ones of the first and second input terminals of the sense amplifier, classified in class 365, subclass 205.
 - II. Claims 13-16, drawn to a method of operating a memory device having a sense amplifier, classified in class 365, subclass 207.

The inventions are distinct, each from the other because of the following reasons:

4. Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the method in Invention II can be used to operate other memory device with different structure than that

Art Unit: 2824

claimed in Invention I; and vice versa, the sense amplifier circuit in Invention I can be used to amplifier signals from other circuits with different operating method than that claimed in Invention II.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

6. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

7. During a telephone conversation with Mr. Robert M. Meeks on 2/4/05 a provisional election was made without traverse to prosecute the invention of I, claim 1-12. Affirmation of this election must be made by applicant in replying to this Office action. Claims 13-16 have been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

EXAMINER'S AMENDMENT

8. The application has been amended as follows:

Cancel claims 13-16.

Allowable Subject Matter

9. Claims 1-12 are allowed.

10. The following is an examiner's statement of reasons for allowance:

Art Unit: 2824

The prior art of record fail to disclose a sense amplifier, in combination with other cited limitations, comprising first and second voltage-dependent capacitors coupled to respective ones of the first and second input terminals of the sense amplifier as recited in claims 1-6 and 7-12.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Chi et al. (5,870,343) disclose a DRAM sensing scheme for eliminating bit-line coupling noise.
- b. Chi et al. (5,917,748) disclose a multi-level DRAM sensing scheme.
- c. Gillingham (5,612,912) discloses a method of multilevel DRAM sense and restore.

Art Unit: 2824

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T. Nguyen whose telephone number is (571) 272-1880. The examiner can normally be reached on Monday - Friday, 7:00 AM - 3:30 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms can be reached on (571) 272-1869. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



March 18, 2005

Tuan T. Nguyen
Patent Examiner
Art Unit 2824


VANTHU NGUYEN
PRIMARY EXAMINER